

1. (currently amended) A method for monitoring and analyzing a paper production process, in which the paper production process includes, as sub-processes:

a wet end, including

- stock preparation
- a head box
- a wire section, and

a dry end, including

- a press section, and
- a dryer section,

~~and in which method~~ the method comprising the steps of:

measuring a large number of variables ~~are measured~~ from the process, also including electro-chemical measurements in the wet end, and

with the aid of these variables, forming a fingerprint according to a good process situation, ~~relative with respect~~ to runnability, ~~is defined~~ and then ~~stored~~ storing the fingerprint in a memory,

comparing the stored fingerprints ~~are compared~~ with fingerprints obtained in an online momentary ~~normal~~ process situation,

on the basis of the comparison, deriving an index of the difference, ~~displayed graphically to the user,~~ between the ~~recorded~~ stored good process situation and the momentary process situation ~~is defined,~~ and graphically displaying the index of the difference to the user,

characterized in that the ~~definition~~ fingerprint according to a good process situation is made separately in several sub-processes, thus creating a deviation index for each sub-process, to be displayed to the user.

2. (original) A method according to Claim 1, characterized in that a runnability index, depicting the runnability of the entire paper machine, is further formed from the indices of the sub-processes.

3. (previously presented) A method according to Claim 1, characterized in that a quality index, depicting the quality of the paper being produced, is also formed for the user.

4. (previously presented) A method according to Claim 1, characterized in that at least the following deviation indices are formed for the user:

- a deviation index depicting the properties of the mass used in the process,
- an index depicting the operation of the head box, and
- an index depicting the operation of the wire section, and
- an index depicting the operation of the press section.

5. (previously presented) A method according to Claim 1, characterized in that deviation indices of at least two consecutive sub-processes are formed for the user.

6. (original) A method, according to Claim 3, in a paper machine, characterized in that wet-end electrochemical measurements, for depicting printability and/or the permanence of ink/filler, are taken into account in the quality index.

7. (previously presented) A method, according to Claim 1, using a neural network, characterized in that the system is used under remote control.